The Nike Missile Antiaircraft System in Military and Historical Context

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The signs of the U.S. military's historical presence are everywhere in the Marin Headlands. A close look in any direction will reveal massive concrete fortifications set into the hillsides overlooking the coastline. The Nike antiaircraft missile system was the last generation in a series of seacoast defense systems that began in the 1790s when a Spanish sailing ship brought bronze cannon to guard the narrows of the Golden Gate from foreign trespassers.

Soon after California became a state in 1850, the U.S. Army began to fortify San Francisco Bay with massive batteries of increasingly powerful guns, starting at Fort Point at the harbor entrance and moving out over time to the headlands on both sides of the Golden Gate. These guns were intended to deter hostile fleets from attacking the United States at a time when heavily-armored battleships ruled the waves, and powerful surface vessels were the ultimate threat. The largest of these batteries were built of reinforced concrete protected behind large earthworks, and could fire a one-ton shell over twenty five miles out to sea. As airplanes became effective instruments of war, the more modern batteries were provided with overhead cover against aerial bombardment.

World War II proved that the threat of attack from aircraft had replaced the threat from ships. The U.S. entry into the war was initiated at Pearl Harbor when a Japanese aerial assault sunk American battleships at anchor. The war with Japan came to a close when American bombers dropped atomic bombs on Japanese cities. Shortly after, the Nike antiaircraft missile system was developed and deployed in the 1950s during the early years of the Cold War.

The threat posed by the existence of Soviet nuclear-armed long-range bombers led to the deployment of antiaircraft guns to protect cities in the continental United States. Nike missile sites were completed in 1954 near strategically important cities, industrial sites (including nuclear weapons factories), and military bases. These antiaircraft missiles functioned as the last line of a defensive team that also consisted of an early warning radar network, analog computer-driven communications systems, and Air Force jet interceptors.

Located in the Marin Headlands, Nike Site SF88-L was one of a dozen missile launcher sites deployed in a ring about the Bay Area from Pacifica in the south to San Rafael in the north and in the East Bay. Upon receiving report of incoming aircraft from early warning radars, Nike system radars locked upon the threat and guided the surface to air missiles to their targets. The most advanced of the Nike missiles could reach out destroy enemy aircraft at a range of 75 miles.

Still, the U.S. government continued to fear that the Soviet bomber force could overwhelm U.S. defenses. The successful 1957 Soviet launching of *Sputnik*, the world's first artificial satellite, not only demonstrated the Soviets' technical ability, it also showed that outer space—the final frontier—was yet another area in which the two nations would compete. During the election of 1960, soon-to-be president John F. Kennedy heightened America's fear of the Soviets and their intentions with descriptions of the "missile gap" between the two superpowers.

Spurred in part by appearing to have backed down in the Cuban Missile Crisis of 1962, the Soviets brought increasing numbers of intercontinental ballistic missiles (ICBM) into service; their numbers were quickly matched by the United States. By the end of the 1960s, these nuclear-armed ICBMs were clearly a greater threat than bombers – it is much more difficult to shoot down a high-speed missile than a jet bomber.

With defensive measures against a missile attack seemingly impossible, a policy of "mutually assured destruction" (MAD) became the most effective deterrent for both the U.S. and the Soviet Union. The theory was that neither side would dare to launch a missile attack if it feared that enough enemy missiles would survive to execute a devastating retaliatory strike This policy guaranteed that the arms race would continue, since both sides wanted to have the ability to survive a first strike; it also limited strategic options to either heavily armed peace or all-out thermonuclear war. Some people said the policy was not just named MAD, but it *was* mad.

Never the less, because of MAD, or in spite of it, an uneasy peace prevailed between the superpowers until the end of the Cold War in 1991. Both sides turned to allied and client state to fight proxy wars, as in Vietnam and Afghanistan.

The Anti-Ballistic Missile Treaty of 1972 forbade either side from developing any more anti-missile weapons systems, based on the premise that doing so would encourage a surprise attack before the huge stockpiles of ICBMs were rendered obsolete. By 1974, most Nike missile sites in the continental United States were abandoned, since ICBMs would destroy antiaircraft defenses and jet interceptors could take care of a follow-up bomber force.

Nike missiles are important to the understanding of Cold War politics for several reasons. Nike was the first practical antiaircraft missile system. It required a huge investment to put into place and maintain. And, probably most dramatically, because it was deployed near dense urban areas, it brought home the threat of the Cold War to a great number of people.